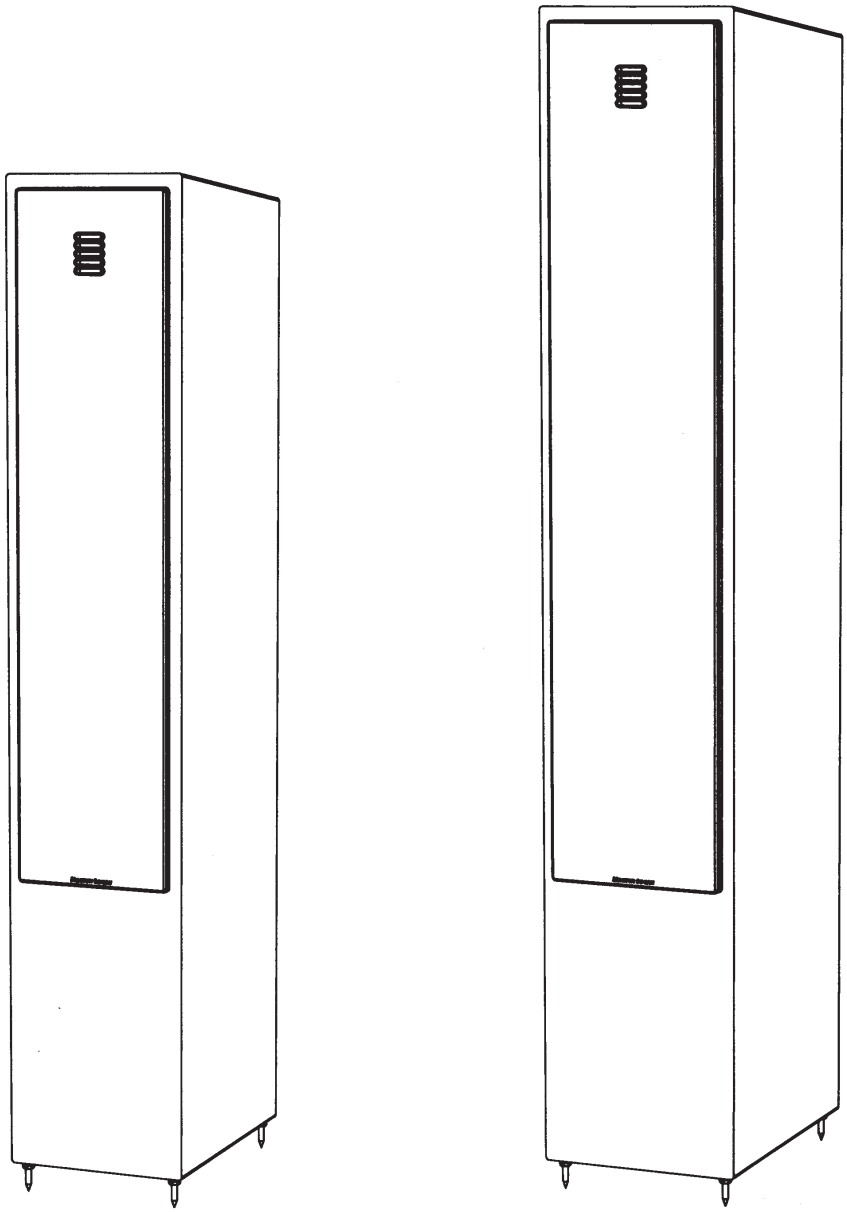
Motion® 20
MARTIN LOGAN

Motion® 40
MARTIN LOGAN

user's manual



WARNING!

- Refer servicing to a qualified technician.
- To prevent fire or shock hazard, do not expose this module to moisture.
- Turn amplifier off should any abnormal conditions occur.
- Do not drive speaker beyond its rated power.

The lightning bolt flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of potentially "dangerous voltage" within the product's enclosure that may be sufficient to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

In accordance with the European Union WEEE (Waste Electrical and Electronic Equipment) directive effective August 13, 2005, we would like to notify you that this product may contain regulated materials which upon disposal, according to the WEEE directive, require special reuse and recycling processing. For this reason Martin Logan has arranged with our distributors in European Union member nations to collect and recycle this product at no cost to you.

To find your local distributor please contact the dealer from whom you purchased this product, email info@martinlogan.com or visit the distributor locator at www.martinlogan.com.

Please note, only this product itself falls under the WEEE directive. When disposing of packaging and other related shipping materials we encourage you to recycle these items through the normal channels.

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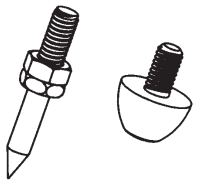
Serial Number:_____

Record your serial number here for easy reference. You will need this information when filling out your warranty registration. The serial number is located near the binding posts and on the product carton.

CE

x4



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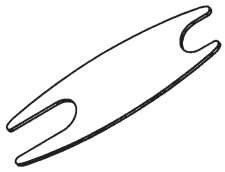
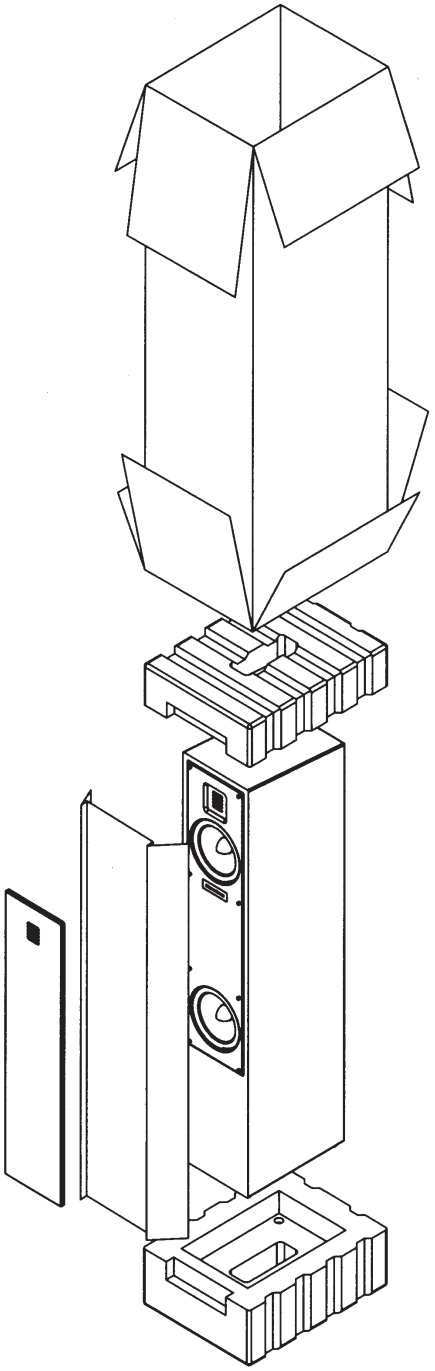
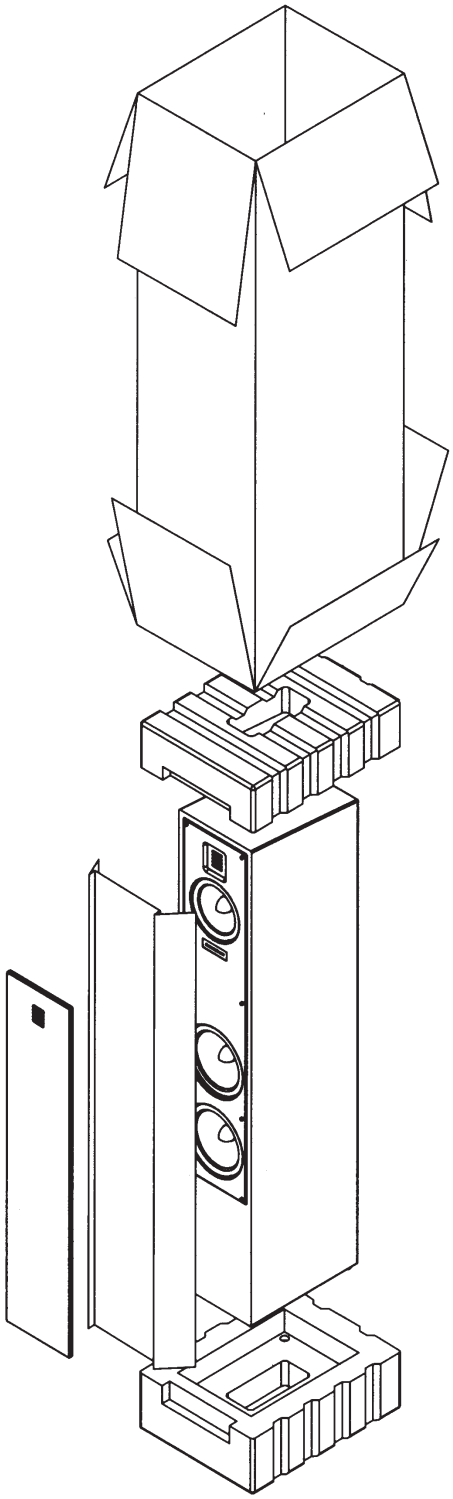




Motion 20



Motion 40

CONNECTION

WARNING! Turn your amplifier off before making or breaking any signal connections!

Use the best speaker cables you can. The length and type of speaker cable used in your system will have an audible effect. Under no circumstance should a wire of gauge higher (thinner) than #16 be used. In general, the longer the length used, the greater the necessity of a lower gauge, and the lower the gauge, the better the sound, with diminishing returns setting in around #8 to #12.

A variety of cables are available whose manufacturers claim better performance than standard heavy gauge wire. We have verified this in many cases, and the improvements available are often more noticeable than the differences between wires of different gauge. The effects of cables may be masked if equipment is not of the highest quality.

Connections are done at the signal input section on the rear electronics panel of the speaker. Use spade connectors for optimum contact and ease of installation. Hand tighten the binding posts, but do not overtighten—do not use a tool to tighten the binding posts.

Be consistent when connecting the speaker cables to the signal input terminals. Take care to assign the same color cable lead to the (+) terminal on both the left and right channel speakers. If bass is nonexistent and you cannot discern a tight, coherent image, you may need to reverse the (+) and (–) leads on one speaker to bring the system into proper polarity.

JUMPER CLIPS

In some countries federal law prohibits MartinLogan from supplying jumper clips. If none are found installed under your speakers binding posts, please refer to 'Bi-Wire Connection' for connection instructions.

Fig. 1: Single-wire connection. One channel shown.

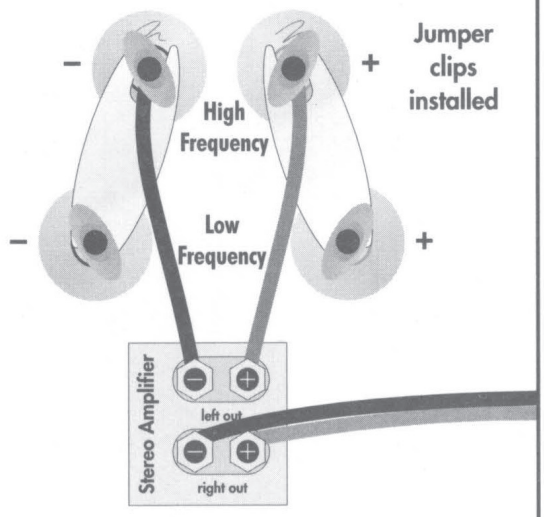
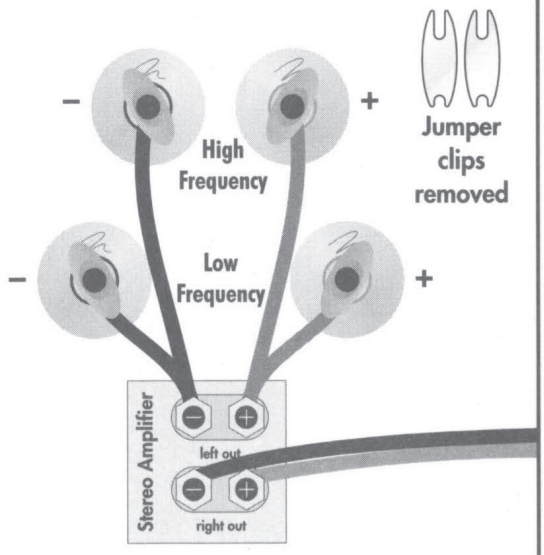


Fig. 2: Bi-wire connection. One channel shown.



SINGLE WIRE CONNECTION

Please take note of the jumper clips installed under the binding posts. These clips attach the high-frequency and low-frequency sections of the crossover together. Leaving these in place, connect the (+) wire from your amplifier to either red (+) binding post and the (–) wire from your amplifier to either black (–) binding post (Fig. 1).

WARNING! Only after jumper clips are removed may you connect individual runs of speaker cable from your amplifiers to the high-frequency and low-frequency signal input binding posts. Damage will occur to your amplifiers if the jumper clips are not removed.

BI-WIRE CONNECTION

This connection method replaces the jumper clips installed under the binding posts with individual runs of speaker wire from your amplifier. This doubles the signal carrying conductors from the amplifier to the speaker, thus direct-coupling each portion of the crossover to the amplifier.

To bi-wire you must first loosen the binding posts and remove the jumper clips. Connect one set of wires to the upper set of binding posts which connect to the high-frequency drivers. Then connect a second set of wires to the lower binding posts which connect to the low-frequency drivers. Next, connect both sets of wires to the appropriate terminals on your amplifier. Please take care to connect both (+) wires to the (+) amplifier terminals and both (–) wires to the (–) amplifier terminals. This is known as a parallel connection (Fig. 2).

PASSIVE BI-AMPLIFICATION

For those that desire ultimate performance, these speakers may be passively bi-amplified using the existing internal passive crossover elements.

This method takes the bi-wiring concept one step further. You will have a dedicated channel of

Fig. 3: Horizontal bi-amplification connection. One channel shown.

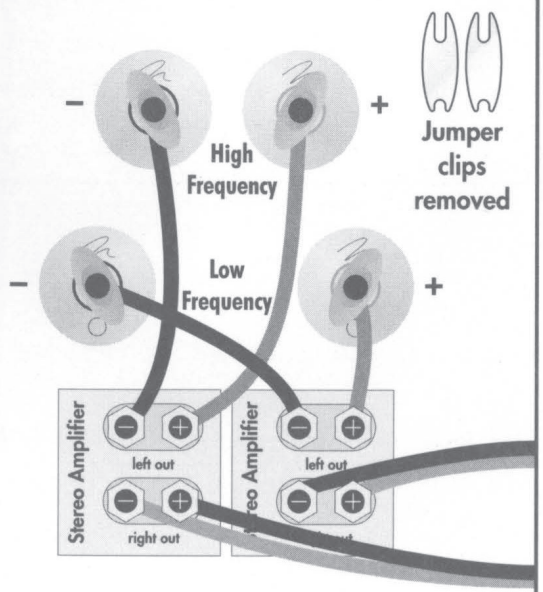
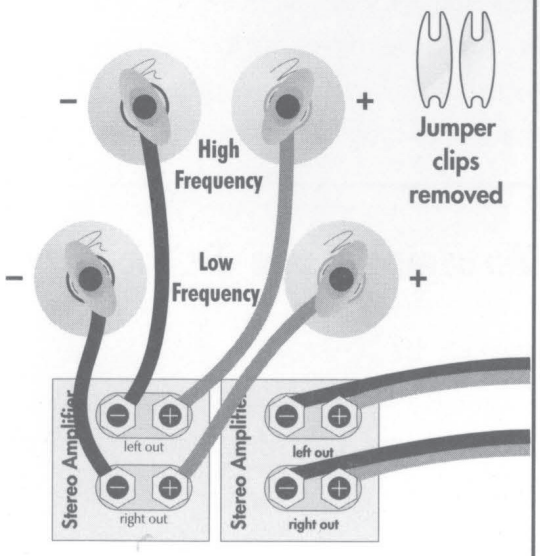


Fig. 4: Vertical bi-amplification connection. One channel shown.



amplification directly connected to the high- and low-frequency sections of the crossover. There are two different methods for bi-amping with two stereo amplifiers. The first and most common is referred to as Horizontal Bi-amping. The second method is referred to as Vertical Bi-amping. With either method you may use two stereo amplifiers or four mono amplifiers, or two mono amplifiers and one stereo amplifier. Get the idea? With either form of passive bi-amplification, your preamplifier must have dual outputs. If your preamplifier is not so equipped, you must either purchase or construct a "Y" adapter.

Horizontal Passive Bi-Amplification

Horizontal bi-amping allows you to use two different types, models or brands of amplifiers (i.e. tubes on top, transistor on the bottom). However, we recommend that you use two identical amplifiers (i.e. same brand and model). If you must use two different amplifiers, it is essential that they have the same gain or that one of the two have adjustable gain so that you can match their gain characteristics. If the amplifiers of choice do not have the same gain characteristics, then a sonic imbalance will occur. With horizontal bi-amping, one amplifier drives the high-frequency section of the speaker while the second amplifier drives the low-frequency section. To horizontally bi-amp your speakers you must loosen the binding posts and remove the jumper clips. Connect the low-frequency amplifier to the lower set of binding posts of both speakers. Connect the high-frequency amplifier to the upper set of binding posts. Next, connect the left and right preamplifier outputs to the appropriate left and right inputs of both amplifiers (Fig. 3).

Vertical Passive Bi-Amplification

The very nature of vertical bi-amping dictates that both amplifiers be identical. With vertical bi-amping, each of the stereo amplifiers is dedicated to one speaker. For instance, the left channel of each amplifier drives the low-frequency section while the right channel drives the high-frequency section. To vertically bi-amp your speakers you must loosen the binding posts and remove the jumper clips from both speakers. Starting with one speaker, connect the right channel to the lower binding posts and the left channel to the upper binding posts. Repeat the same procedure for the other speaker. Connect the left preamplifier outputs to both inputs of the left channel amplifier and the right preamplifier outputs to both inputs of the right channel amplifier (Fig. 4).

ACTIVE BI-AMPLIFICATION

We do not recommend active bi-amplification. The internal crossover can not be bypassed. This connection method seriously degrades performance.

Assembly and Placement

BREAK IN

Allow approximately 72 hours of break-in at 90 dB (moderate listening levels) before any critical listening.

PLACEMENT

Although your speakers are designed to deliver a superb sonic performance when placed close to a wall, you may notice improved imaging and detail if you are able to place the speakers *(measured from the tweeter and woofers)* 2–3 feet from the front wall and 2 or more feet from the side walls (Fig. 5).

TOE-IN

To achieve superior stereo imaging we recom-

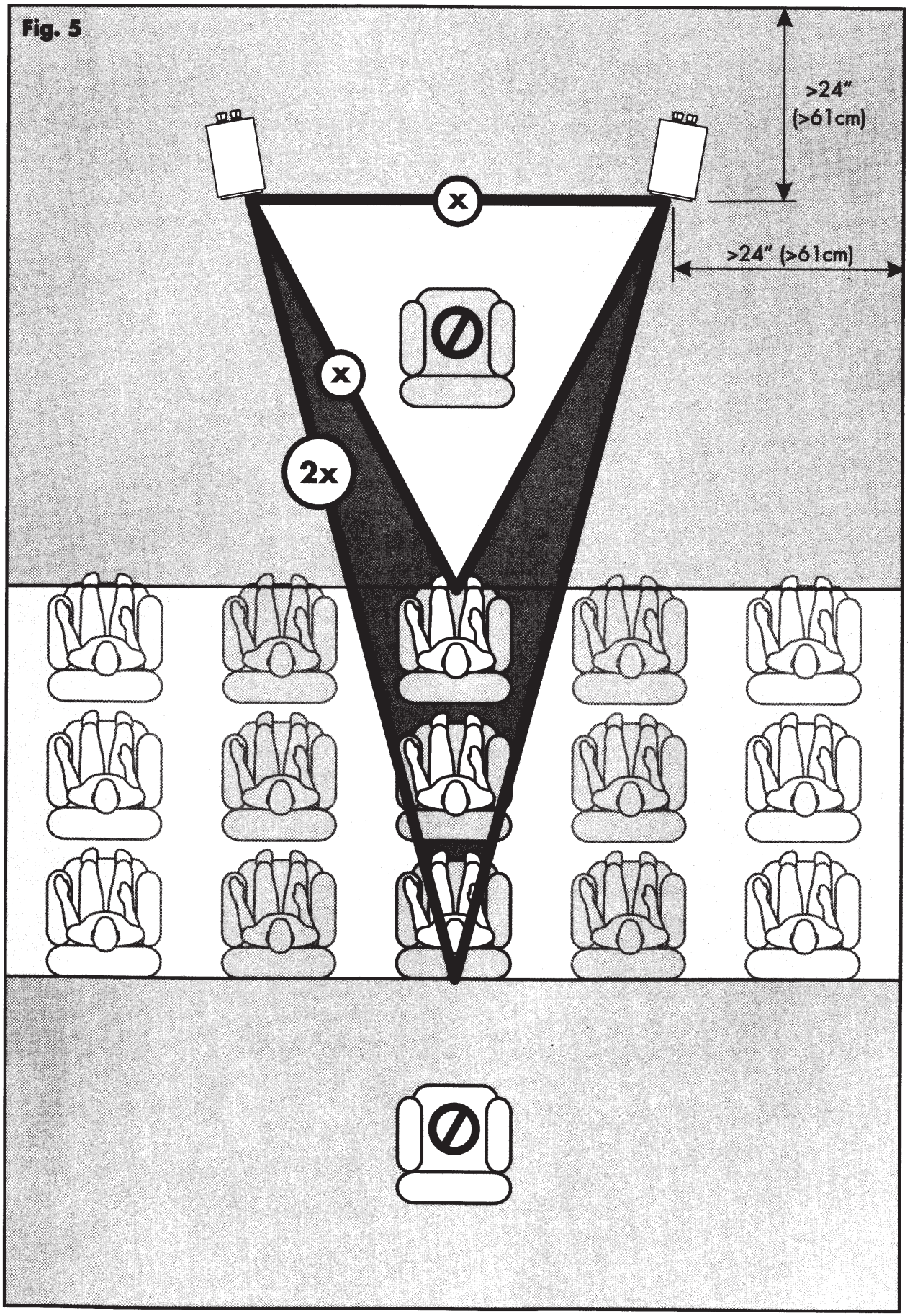


Fig. 5
>24"
(>61cm)
x
>24" (>61cm)
x
2x

mend that you aim them towards the primary listening position.

INSTALLING THE GRILL COVERS

To install this speaker's magnetic grill covers simply move them into place (Fig. 6).

SOLID FOOTING

With the use of the included spikes, your speakers will be firmly planted on the floor, bass will tighten, and imaging will become more coherent. To avoid floor damage, do not implement the spikes until you are secure in the positioning. The included spikes use a standard 1/4 - 20 thread.

Spike Installation Instructions (Fig. 7):

1) Carefully lay your speaker on its side.

2) Remove existing feet or spikes. Thread new spikes into holes and screw them in all of the way. If the speaker does not sit level loosen one spike until level is achieved.

3) Tighten the jam nut snugly by hand. Do not over tighten the nut.

4) Right the speaker. **Caution:** Make sure your hands and any cabling are clear of the spikes. Do not slide speaker as spikes are sharp and can damage your floor or carpet.

5) Adjust to level by rotating spikes. Tighten the jam nut securely when satisfied that speaker is level. **Caution:** "Walking" the speaker may result in a broken spike.

Fig. 6

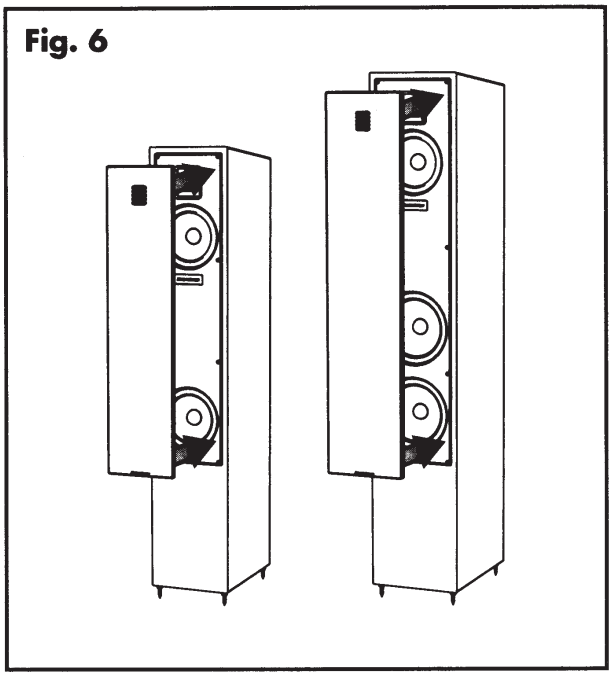
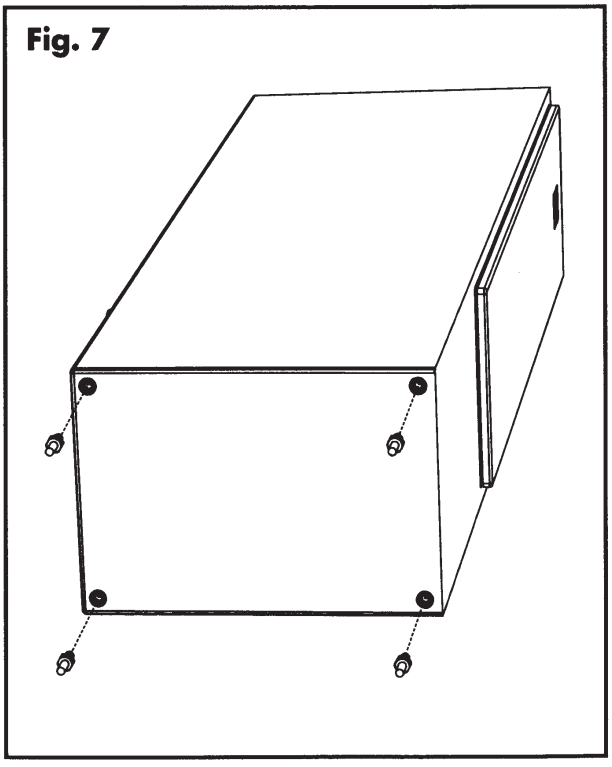


Fig. 7



Frequently Asked Questions

How do I clean my speakers?
Use a dust free cloth (such as a micro fiber cloth) or a soft brush to remove dust from your speakers. **Do not spray any kind of cleaning agent on or in close proximity to the drivers.**

Could you suggest a list of suitable electronics and cables ideal for MartinLogan speakers?
We have no favorites and use electronics and cables quite interchangeably. We would suggest listening to a number of brands—and above all else—trust your ears. Dealers are always the best source for information when purchasing additional audio equipment.

Is there likely to be any interaction between my speakers and the television in my A/V system?
Yes. These speakers are not shielded and should be kept at least 2 feet away from a CRT television.

Will exposure to sunlight affect the life or performance of my speakers?
We recommend against placing any loudspeaker in direct sunlight. Ultraviolet (UV) rays from the sun can cause deterioration of cabinet, speaker cones, etc. Small exposures to UV will not cause a problem. Filtering of UV rays through glass will greatly reduce the negative effects.

Should I use a 4, 6, or 8 Ohm rated amplifier with my speakers?
All of our Motion series speakers are compatible with 4, 6 or 8 Ohm output audio amplifiers and receivers. Many of the most popular brands of AV receivers and amplifiers with 4, 6 and 8 Ohm output ratings have been thoroughly tested with all of our Motion series products and we have found no compatibility issues except under extreme listening conditions. For the best performance and sonic purity when using our Motion series products use of an amplifier or AV receiver with either a 4 or 6 Ohm output is recommended!

Troubleshooting

No Output

- Check that all system components are turned on and source material is playing.
- Check speaker wires and connections.
- Check all interconnecting cables.
- If you are unable to resolve your problem, please contact your dealer or MartinLogan customer service (see below).

Contacting Customer Service

MartinLogan customer service is available Monday–Friday between the hours of 8am–5pm (central time) by calling (785) 749-0133 or by emailing service@martinlogan.com.

General Information

WARRANTY INFORMATION

Your speakers are provided with an automatic Limited 90 Day Warranty coverage. You have the option, at no additional charge, to receive a Limited 5 Year Warranty coverage. To obtain the Limited 5 Year Warranty coverage you need to complete and return the Certificate of Registration to MartinLogan within 30 days of purchase. For your convenience MartinLogan also offers online warranty registration at www.martinlogan.com.

MartinLogan may not honor warranty service claims unless we have a completed Warranty Registration card on file! If you did not receive a Certificate of Registration with your new speakers you cannot be assured of having received new units. If this is the case, please contact your authorized MartinLogan dealer.

SERIAL NUMBER

The serial number is located on back of the speaker, directly beneath the binding posts. The serial number may also be found on the product carton.

SERVICE

Should you use your MartinLogan product in a country other than the one in which it was originally purchased, we ask that you note the following:

1 The appointed MartinLogan distributor for any given country is responsible for warranty servicing only on units distributed by or through it in that country in accordance with its applicable warranty.

2 Should a MartinLogan product require servicing in a country other than the one in which it was originally purchased, the end user may seek to have repairs performed by the nearest MartinLogan distributor, subject to that distributor's local servicing policies, but all cost of repairs (parts, labor, transportation) must be borne by the owner of the MartinLogan product.

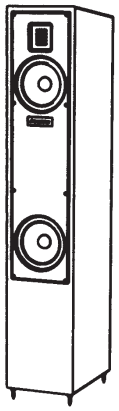
3 If, after owning your speaker for six months, you relocate to a country other than the one in which you purchased your speaker, your warranty may be transferable. Contact MartinLogan for details.

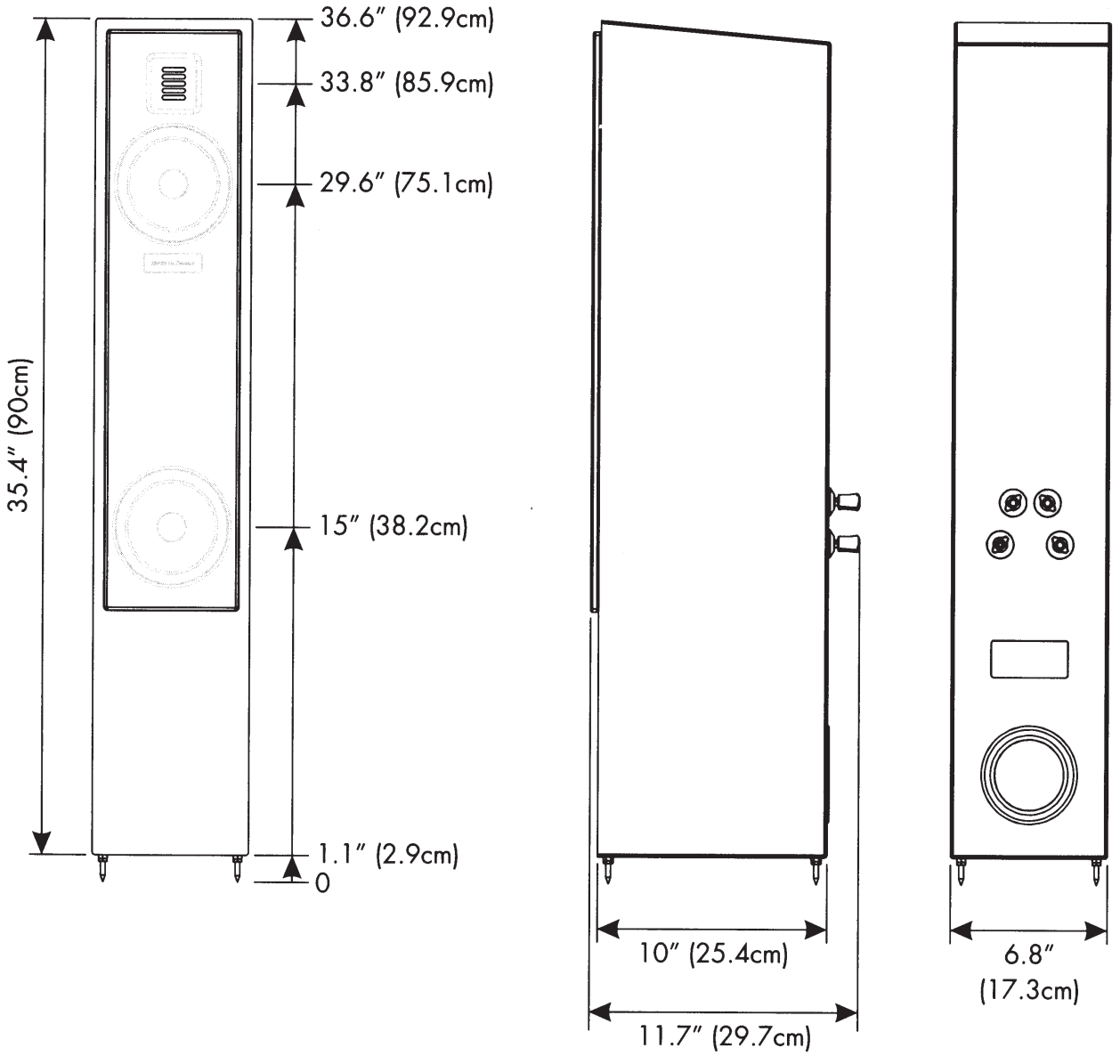
SPECIFICATIONS*	**MARTINLOGAN MOTION 20**	**MARTINLOGAN MOTION 40**
Frequency Response	46–25,000 Hz ± 3 dB	40–25,000 Hz ± 3 dB
Dispersion	80° x 80°	80° x 80°
Sensitivity	90 dB @ 2.83 volts/ meter	92 dB @ 2.83 volts/ meter
Impedance	4 Ohms. Compatible with 4, 6 or 8 Ohm rated amplifiers.	4 Ohms. Compatible with 4, 6 or 8 Ohm rated amplifiers.
Crossover Frequency	500 & 2,600 Hz	500 & 2,600 Hz
High Frequency Driver	1" x 1.4" (2.6cm x 3.6cm) Folded Motion Transducer with 5.25" x 1.75" (13.3cm x 4.4cm) diaphragm.	1" x 1.4" (2.6cm x 3.6cm) Folded Motion Transducer with 5.25" x 1.75" (13.3cm x 4.4cm) diaphragm.
Mid Frequency Driver	. . . . .	5.5" (14cm) aluminum cone with cast polymer basket. Non-resonant asymmetrical chamber format. Rigid structured dust cap to reduce cone break-up modes.
Low Frequency Drivers	Two 5.5" (14cm) aluminum cone with cast polymer basket. Non-resonant asymmetrical chamber format. Rigid structured dust cap to reduce cone break-up modes.	Two 6.5" (16.5cm) aluminum cone with cast polymer basket. Non-resonant asymmetrical chamber format. Rigid structured dust cap to reduce cone break-up modes.
Cabinet	Ported	Ported
Components	Custom air core coil and low DCR steel laminate inductors. Polyester film capacitors in series and low DF electrolytic capacitors in parallel. Tweeter thermal/current protection.	Custom air core coil and low DCR steel laminate inductors. Polyester film capacitors in series and low DF electrolytic capacitors in parallel. Tweeter thermal/current protection.
Recommended Amp Power	20–200 watts	20–300 watts
Binding Post Inputs	Custom 5-way bi-wire tool-less binding posts	Custom 5-way bi-wire tool-less binding posts
Weight	37 lbs. (16.8 kg)	49 lbs. (22.2 kg)
Dimensions (HxWxD)	36.6" x 6.8" x 11.7" (92.9cm x 17.3cm x 29.7cm)	42.5" x 7.6" x 12.8" (107.9cm x 19.2cm x 32.6cm)

**Specifications are subject to change without notice.*

Dimensional Drawings

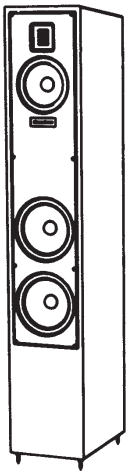
MARTINLOGAN MOTION 20

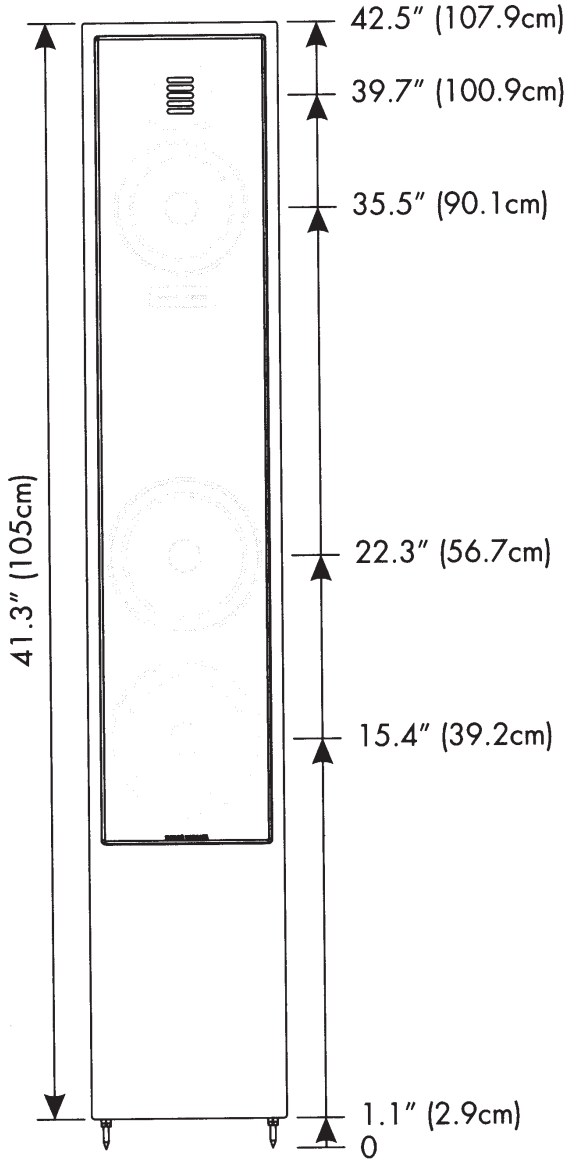


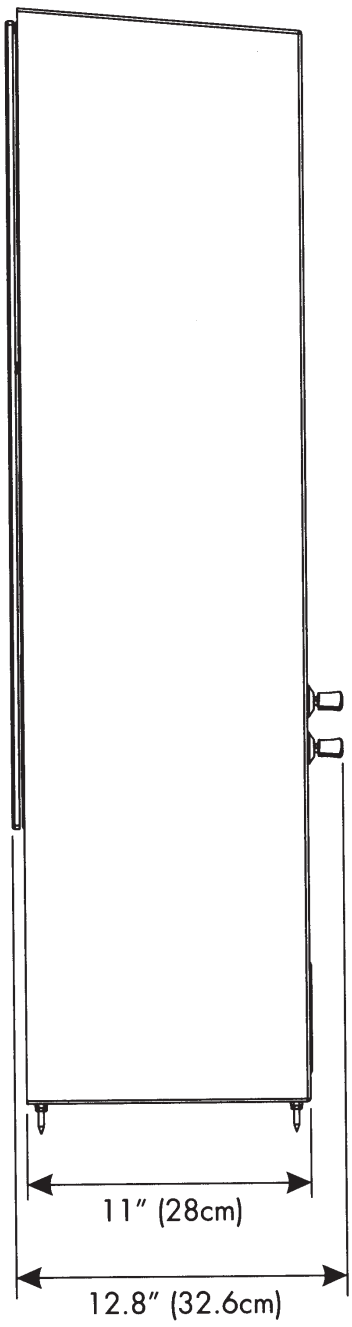


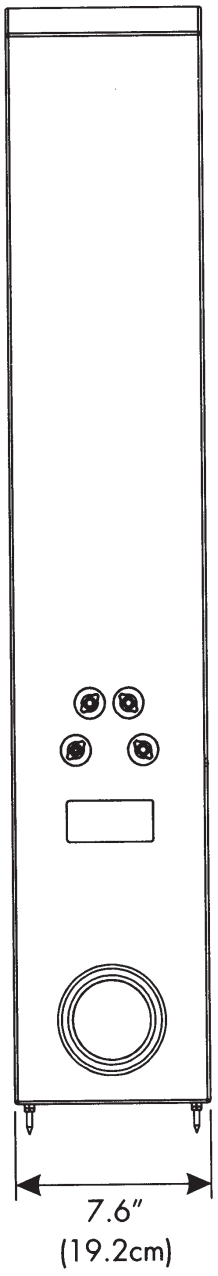
Dimensional Drawings

MARTINLOGAN MOTION 40









MARTIN LOGAN®

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P/N: 9500080

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Rev. #010312

MARTIN LOGAN®

NO POSTAGE
NECESSARY IF
MAILED IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 66 LAWRENCE, KS

POSTAGE WILL BE PAID BY ADDRESSEE

MARTIN LOGAN
2101 DELAWARE ST
LAWRENCE, KS 66046-9702
USA

Important!

To receive a Limited Five Year Warranty (Three Year Warranty for subwoofers), free of charge, you must return this registration card within 30 days from date of delivery. For your convenience MartinLogan offers full warranty details and online warranty registration at www.martinlogan.com. **Important:** Please retain your receipt. A copy of your receipt will be required should your speaker require servicing in the future.

Contact Information

Name _____

Address _____

_____

City _____

State _____ Zip _____

Phone _____

E-mail _____

☐ Check here if you would like to receive occasional email updates about news and opportunities regarding MartinLogan.

Register online at www.MartinLogan.com!

Speaker Information

Model(s) _____

Serial #(s) _____

Date of Purchase _____

Date of Delivery _____

Retail Store Name _____

Salesperson's Name _____

How did you initially learn about MartinLogan (choose one)**?**

☐ Internet ☐ Sales associate ☐ Friend or family member

☐ Audio magazine (please specify): _____

☐ Other magazine (please specify): _____

☐ Other (please specify): _____

Rev. 060909